PP-218 Evaluation of MODS culture in diagnosis of pulmonary tuberculosis

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Background: Culture of *Mycobacterium tuberculosis* is the gold standard for diagnosis of TB that is a much more sensitive test than smear examination. There is a need to use the new methods assay in order to fast diagnostic way. Aim of this research was to determine evaluation of Microscopic Observation Drug Susceptibility culture in pulmonary tuberculosis in comparison with Ziehl-Neelsen stain and Lowenstein-Jensen culture of sputum.
Methods: The research method was a clinical trial (diagnostic test) and the technique was observational interview type. If the patient's history revealed clinical criteria compatible with TB and the infectious specialist judgment was that of "TB suspected case" the patient was considered as a pulmonary TB suspect. Then, in addition to sputum Ziehl-Neelsen stain and culture for Lowenstein-Jensen, we did MODS culture.
Results: 100 patients (48 male, 52 female) with mean of 52.9±21.83 were evaluated. On sputum examination, 40% were Ziehl-Neelsen stain positive while 30% had positive sputum culture for *Mycobacterium tuberculosis* in Lowenstein-Jensen and 47% had positive MODS culture. In comparison with sputum smear and Lowenstein-Jensen culture, MODS had sensitivity of 82.5% and 86%, specificity of 77% and 70%, positive predictive value of 70% and 55%, negative predictive value of 86% and 92%, respectively.
Conclusion: MODS culture demonstrated faster recovery and higher negative predictive value than by Lowenstein-Jensen method, it could be a simple and rapid method in diagnosis of pulmonary tuberculosis.

PP-219 Knowledge, beliefs and attitude of patients regarding tuberculosis

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Objective: The objective of this study was to determine the knowledge and attitude of patients visiting outdoor patient department of Nishtar Hospital, Multan regarding tuberculosis (TB).
Methods: 168 patients aged 18 years and above were interviewed using a pre-tested structured questionnaire comprising of socioeconomic variables and questions related to knowledge, beliefs and attitude related to TB including cause, transmission, common features, treatment, cure and prevention.
Results: The patients were predominantly male (65%), had nuclear family structure (78%) and were literate (62%). Majority of patients (81%) had heard about TB. Major sources of information were TV (56%), Newspaper (27%) and Radio (17%). Patients considered pollution (71%), germs (14%) and cough (5%) as major causes of TB. None of the patients knew all symptoms of disease and presence of an asymptomatic stage. Patients were aware that TB is curable and 40% knew about duration of treatment. All patients said that they would tell their near ones if they are diagnosed with TB while 68% people said they would stop taking medications after relief if they had TB. All of the patients who knew about TB reported that one can live a normal life after cure and that disease affects daily activities, marital life and eating habits. 66% and 75% patients respectively thought that TB can cause infertility and death if untreated. 43% people were of the view that TB patients are stigmatized.
Conclusions: Although majority of patients knew about TB, their overall knowledge was inadequate. Awareness programs aiming at a wider audience addressing all aspects of disease are required to improve knowledge of public about the disease.

PP-220 Altered protein expression patterns of *Mycobacterium tuberculosis* induced by ATB107

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Background: ATB107 is a potent inhibitor of indole-3-glycerol phosphate synthase (IGPS). It can effectively inhibit the growth of clinical isolates of drug-resistant *Mycobacterium tuberculosis* strains as well as *M. tuberculosis* H37Rv.
Methods: To investigate the mechanism of ATB107 action in *M. tuberculosis*, two-dimensional gel electrophoresis coupled with MALDI-TOF-MS analysis (2-DE-MS) was performed to illustrate alterations in the protein expression profile in response to ATB107.
Results and Conclusion: Results show that ATB107 affected tryptophan biosynthesis by decreasing the expression of protein encoded by Rv3246c, the transcriptional regulatory protein of MtrA belonging to the MtrA-MtrB two-component regulatory system, in both drug-sensitive and drug-resistant virulent strains. ATB107 might present a stress condition similar to isoniazid (INH) or ethionamide for *M. tuberculosis* since the altered expression in response to ATB107 of some genes, such as Rv3140, Rv2243, and Rv2428, is consistent with INH or ethionamide treatment. After incubation with ATB107, the expression of 2 proteins encoded by Rv0685 and Rv2624c was down-regulated while that of protein encoded by Rv3140 was up-regulated in all *M. tuberculosis* strains used in this study. This may be the common response to tryptophan absence; however, relations to ATB107 are unknown and further evaluation is warranted.

PP-221 Finding latent *Mycobacterium tuberculosis* infection in health care workers using Esat-6 interferon gamma assay

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Introduction and Aims: Latent tuberculosis infection is considered as a serious health problem around the world. Among population, health care workers are at high risk of such infections. To determine the frequency of IFN-γ producing T cells against *Mycobacterium* ESAT-6 antigen and comparing that to PPD reactivity in vitro and in vivo in Shiraz University medical centers.
Materials and Methods: Fifty lab workers from microbiology laboratories and radiology departments, in addition to 30 healthy individuals were recruited in this study. Standard PPD skin test was performed and reactivity of blood T cells against recombinant ESAT-6 and PPD were analyzed in IFN-γ ELISPOT assay. Positive reactions and frequency of responsive cells were calculated and compared.
Results: Participants in this study had work experience of 1–33 years (Mean 11.2±9.5). Only 6 of them (12%) showed skin reaction zone greater than 10 mm. There was no correlation of this reactivity and years of work experience among microbiology technicians. ELISPOT assay showed